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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/545,520	04/07/2000	Yukio Ohura	152/48811	9864

7590 09/11/2002

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EXAMINER

LE, DANG D

ART UNIT	PAPER NUMBER
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2834

DATE MAILED: 09/11/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/545,520

Applicant(s)

OHURA, YUKIO

Examiner

Dang D Le

Art Unit

2834

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 05 August 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 2-4 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 2-4 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Request for Continued Examination

1. The request filed on 8/5/02 for a Request for Continued Examination (RCE) under 37 CFR 1.114 based on parent Application No. 09/545520 is acceptable and an RCE has been established. An action on the RCE follows.

Claim Objections

2. Claim 2 is objected to because of the following informalities: claim 2, last line, replace "rotatation" with -- rotation --. Appropriate correction is required.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 2-4 are rejected under 35 U.S.C. 103(a) as being unpatentable over the applicant's admitted of prior art (Figures 4 and 5) in view of Meinke et al.

Regarding claim 2, the applicant's admitted of prior art shows a bearing unit (Figures 4 and 5) comprising a magnetic bearing (7 and 8) which supports a rotatable shaft (2) in a non-contact condition, and a rolling bearing (11) which does not support the rotatable shaft while the magnetic bearing supports the rotatable shaft, wherein the rolling bearing (11) is arranged to be connected in the axial direction to the rotatable shaft for supporting the rotatable shaft upon rotation stoppage, the rolling bearing

comprising a double row, angular ball bearing and provided on the side where thrust load is received or on the side where positioning in the axial direction is carried out, the double row, angular ball bearing having inner and outer races and balls between the inner and outer races, and supported only by the other of the inner and outer races through the balls (14), whereby a large thrust load (F_a) from the rotatable shaft is borne by the rolling bearing upon the rotation stoppage.

The applicant's admitted of prior art does not show one of the inner and outer races being an integral race installed on the side of the rotatable shaft with a radial clearance between the integral race the shaft in the non-contact condition.

Meinke et al. show one of the inner and outer races being an integral race (27) installed on the side of the rotatable shaft with a radial clearance between the integral race for the purpose of supporting the shaft in emergency.

Since the applicant's admitted of prior art and Meinke et al. are all from the same field of endeavor, the purpose disclosed by one inventor would have been recognized in the pertinent art of the others.

It would have been obvious at the time the invention was made to a person having ordinary skill in the art to make the angular ball bearing with inner and outer races and one of the inner and outer races as an integral race installed on the side of the rotatable shaft with a radial clearance between the integral race and the shaft in the non-contact condition as taught by Meinke et al. for the purpose discussed above.

Regarding claim 3, it is noted that the applicant's admitted of prior art also shows the rotatable shaft having a flange to which one end of the integral race is abutted in the axial direction upon the rotation stoppage.

Regarding claim 4, it is noted that the applicant's admitted of prior art and Meinke et al. also show a bearing unit comprising a magnetic bearing which supports a rotatable shaft in a non-contact condition during operation, and a rolling bearing which is provided on either side of the magnetic bearing and arranged to be separated from the rotatable shaft while the magnetic bearing supports the rotatable shaft and to come into contact with the rotatable shaft for supporting the rotatable shaft when the magnetic bearing does not support the rotatable shaft, and a supporting member for supporting the rolling bearing, wherein the rolling bearing provided on the side with respect to the magnetic bearing where the thrust load is received or on the side with respect to the magnetic bearing where positioning in the axial direction is carried out comprises a double row, angular ball bearing for supporting the rotatable shaft against a thrust load upon rotation stoppage, and wherein the double row, angular ball bearing has inner and outer races and balls between the inner and outer races, such that one of the inner and outer races is an integral race installed on the side of the rotatable shaft with a radial clearance between the integral race and the shaft in the non-contact condition and supported only through the balls against the thrust load from the rotatable shaft when the rolling bearing comes into contact with the rotatable shaft while the other of the inner and outer races is securely supported by the supporting member (5).

Information on How to Contact USPTO

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dang D Le whose telephone number is (703) 305-0156. The examiner can normally be reached on Monday through Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nestor Ramirez can be reached on (703) 308-1371. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 308-7382 for regular communications and (703) 308-7382 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-1782.

DDL
September 8, 2002

RC

Dang D Le